



EMPOWERMENT OF PKK WOMEN IN MUARO SENTAJO VILLAGE THROUGH ORCHID CULTIVATION COMMERCIALIZATION AND DIGITAL MARKETING TRAINING

PEMBERDAYAAN PEREMPUAN PKK DI DESA MUARO SENTAJO MELALUI KOMERSIALISASI BUDIDAYA ANGGREK DAN PELATIHAN PEMASARAN DIGITAL

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Abstract

Muaro Sentajo possesses the potential to be developed as a production hub for native orchid species due to its location within the natural habitat of orchid species in Kuantan Singingi Regency, directly bordering the Sentajo Raya protected forest. Furthermore, the village has an underutilized female labor potential, organized within the Family Welfare Movement (Pemberdayaan dan Kesejahteraan Keluarga / PKK) as the foundational collective for rural women in Muaro Sentajo. This initiative aims to provide knowledge on native orchid species, cultivation techniques, integrated systems with stingless bees (kelulut), and digital marketing. The program implemented a Participatory Action Research (PAR) approach, consisting of asset mapping, practical cultivation workshops, e-commerce platform development, and four months of intensive mentoring. This empowerment program successfully established an active orchid breeding group managing more than 15 native orchid species. Additionally, 83.66% of the participants demonstrated proficiency in operating digital marketing channels (Instagram and Shopee), resulting in the first independent commercial sales of local orchid products. The integration of local ecological assets with modern digital marketing proved effective in enhancing the economic independence of rural women and promoting sustainable community development.

Keywords : Community Empowerment, Orchid Commercialization, Digital Marketing, PKK Women's Group, Rural Economy.



Abstrak

Muaro Sentajo memiliki potensi untuk dikembangkan sebagai sentral produksi anggrek spesies karena berada dikawasan habitat alami anggrek spesies kabupaten Kuantan Singingi, karena berbatasan langsung dengan hutan lindung sentajo raya. Selain itu desa ini juga memiliki potensi tenaga kerja wanita yang belum dimanfaatkan secara optimal, yang tergabung kedalam kelompok Ibu PKK sebagai basis berhimpun dari kelompok perempuan desa Muaro Sentajo. Tujuan dari kegiatan ini adalah untuk memberikan pengetahuan tentang anggrek spesies, teknik budidaya, sistem integrasi dengan kelulut dan digital marketing. Program ini menerapkan pendekatan Participatory Action Research (PAR), yang terdiri dari pemetaan aset, lokakarya budidaya praktis, pembuatan platform e-commerce, dan pendampingan intensif selama empat bulan. Program pemberdayaan ini berhasil membentuk kelompok penangkaran anggrek aktif yang mengelola lebih dari 15 jenis anggrek spesies. Selain itu, 83,66 % peserta menunjukkan kemahiran dalam mengoperasikan saluran pemasaran digital (Instagram dan Shopee), yang menghasilkan penjualan komersial pertama produk anggrek lokal secara mandiri. Integrasi aset ekologis lokal dengan pemasaran digital modern terbukti efektif meningkatkan kemandirian ekonomi perempuan perdesaan dan mendorong pembangunan masyarakat yang berkelanjutan.

Kata Kunci : Pemberdayaan Masyarakat, Komersialisasi Anggrek, Pemasaran Digital, Ibu PKK, Ekonomi Perdesaan.

1. INTRODUCTION

Muaro Sentajo is a village with environmental potential that highly supports the development of native orchid species. Its landscape serves as a natural habitat for dozens of orchid species, which possess commercial value as both ornamental and medicinal plants. The village exhibits socio-cultural diversity and heterogeneity, with a predominantly Muslim population, and is geographically located within a protected forest area (Lestari et al., 2026). The Sentajo Raya protected forest is a customary forest area spanning parts of Muaro Sentajo Village, housing thousands of local biodiversity elements, including native orchid species (Mustayyib et al., 2017).

The ecological landscape that buffers the orchid habitat in the Sentajo Raya protected forest also harbors underutilized female labor potential. This group of women is organized within the Family Welfare Movement (Pemberdayaan dan Kesejahteraan Keluarga / PKK), which serves as a collective platform for community engagement and problem-solving. The fundamental challenge in establishing Muaro Sentajo as a production hub for native orchid species lies in the limited knowledge of the PKK members. Specifically, they lack clear understanding regarding orchid taxonomy, cultivation methods, integrated systems with stingless bees (kelulut), and digital marketing strategies for downstream operations.

This community service (Pengabdian kepada Masyarakat / PKM) empowerment initiative offers a comprehensive solution to these challenges. It focuses on enhancing knowledge of native orchid species, practical cultivation, integration with stingless bee systems, and digital marketing skills. Consequently, the primary objective of this PKM initiative is to equip participants with comprehensive knowledge regarding native orchid species, cultivation techniques, stingless bee integration systems, and digital marketing.

2. RESEARCH METHOD

This community service program implemented the Participatory Action Research (PAR) method, positioning the Family Welfare Movement (PKK) women's group of Muaro Sentajo Village not merely as passive subjects, but as active collaborators (co-researchers) throughout all stages of the program (Khafsoh & Riani, 2024). The PAR approach was executed through a four-stage cyclical process.



Planning: The implementation team and the PKK board conducted a collaborative situational analysis to identify the primary barriers to local orchid commercialization and the low level of digital marketing literacy within the village.

Acting: Actionable solutions were executed across two core focuses: technical workshops on cultivating market-ready native orchid species, and intensive training sessions on developing digital marketing platforms (including Shopee account creation and social media optimization).

Observing: The team conducted direct monitoring of the PKK members' proficiency in applying cultivation techniques, executing product branding, and managing transactions on e-commerce marketplaces.

Reflecting: A joint evaluation was conducted between the implementation team and the partners using pre-test and post-test questionnaire instruments. This step measured the participants' skill advancement and identified remaining technical constraints to formulate long-term business sustainability strategies.

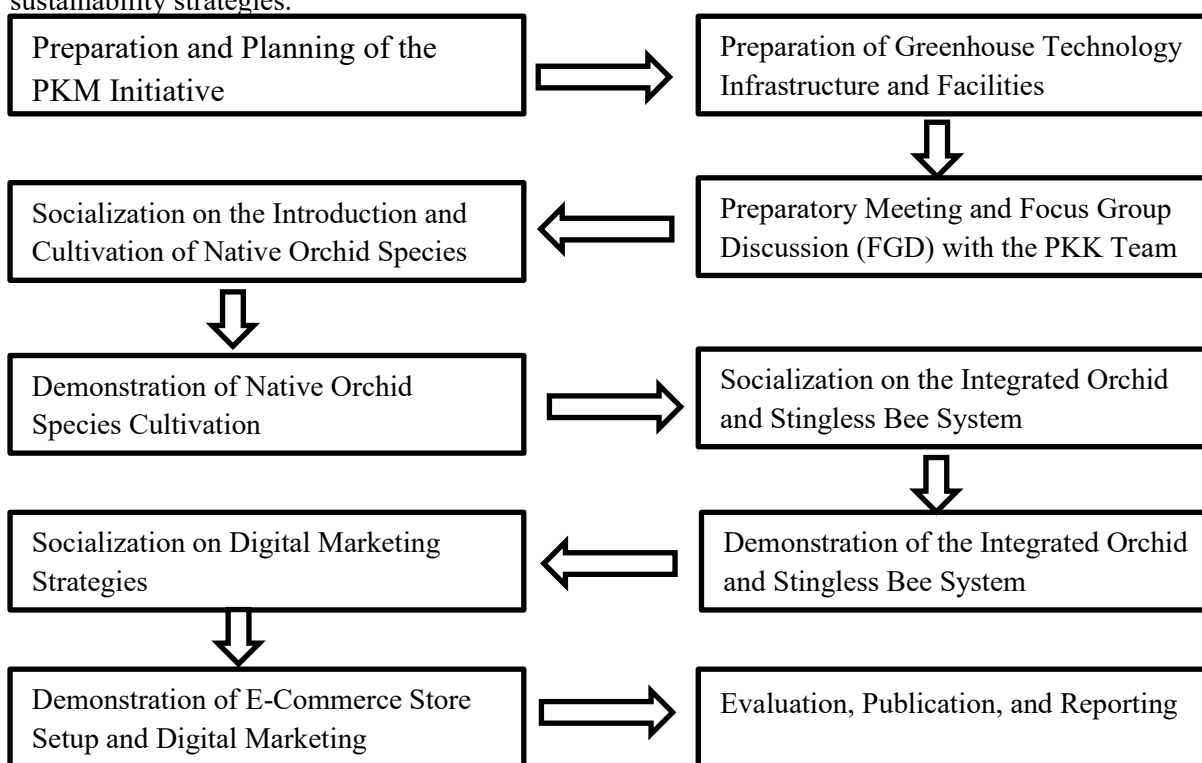


Figure 1. Flowchart of the Community Service Program Implementation

3. RESULT AND DISCUSSION

Overview of Muaro Sentajo Village and the PKK Women's Group

Muaro Sentajo Village exhibits promising potential and significant prospects for development in terms of both natural and human resources. The village possesses a substantial female population, organized within the local Family Welfare Movement (Pemberdayaan dan Kesejahteraan Keluarga / PKK) women's group. This PKK group has a sizable membership, including 20 active members who serve as part of the group's executive board. In terms of age distribution, the membership is predominantly composed of women aged 20 to over 40 years. This demographic profile indicates that the group is dominated by mature adult women and lacks significant participation from youths and adolescents.

**Table 1. Summary of socio-demographic conditions**

No	Variabel (socio-demographic conditions)	Mean/SD
1	Age (year)	
	10-18 Year	0,00 ± 0,00
	19-25 Year	0,00 ± 0,00
	26 - 40 Year	50,00 ± 0,00
	>41 Year	50,00 ± 0,00
2	Education	
	Elementary school	7,1 %
	Junior High school	21,4 %
	Senior High school	42,9 %
	Bachelor's Degree	28,6 %
3	Occupation	
	Homemaker	85,7%
	Civil Servant	0,00 %
	Self-employed	0,00%
	Other	14,3 %

Success in Orchid Introduction and Cultivation, Integrated Systems, and Digital Marketing

This community service initiative, which targeted the Family Welfare Movement (PKK) women's group of Muaro Sentajo Village, focused on the development of native orchid species, integrated systems with stingless bees (*kelulut*), and digital marketing. The program was executed systematically and yielded a significant impact on enhancing the group's competencies in orchid cultivation, system integration, and digital marketing. The following data illustrate the advancements and outcomes achieved through this community service initiative in Muaro Sentajo Village.

Table 2. Pretest and posttest results

No	Variabel	Pre Test (%)	Post Test (%)	Improvement
1	Knowledge Level of Native Orchid Species	55,1 ± 10,69	81,2 ± 8,08	26,1 %
2	Knowledge Level of Orchid Cultivation	42,9 ± 2,21	87,7 ± 8,07	44,8 %
3	Knowledge Level of Flowering Induction in Native Orchid Species	28,6 ± 1,22	80,0 ± 2,00	51,4 %
4	Knowledge Level of Integrated Orchid and Stingless Bee Systems	22,6 ± 1,12	81,21 ± 3,12	58,61 %
5	Knowledge Level of Digital Marketing	32,6 ± 3,12	83,66 ± 3,21	51,06 %

Success in Orchid Cultivation

The baseline knowledge regarding native orchid species among the Family Welfare Movement (PKK) women's group of Muaro Sentajo Village was relatively low at 55.1%. This initial knowledge was assessed based on the participants' accuracy in identifying orchid species from displayed visual images. Following this assessment, a comprehensive presentation on the native orchid species found in the Muaro Sentajo Village area was delivered, leading to a 26.1% increase in knowledge, reaching 81.2%. This successful improvement was achieved through the implementation of two-way communication techniques during the material delivery (Nihayah et al., 2023).

The remaining 18.8% gap in knowledge that still requires improvement is attributed to the demographic profile of the group, wherein 50% of the participants were over 40 years old. This age factor correlates with a gradual decline in cognitive processing speed and memory retention (Yuniati, 2017). Nevertheless, this constraint did not diminish the participants' motivation and enthusiasm to contribute positively to native orchid development.

The participants' success in identifying orchid species was further supported by their enhanced competencies in cultivating these plants. The group members successfully acclimatized 50



Phalaenopsis (*anggrek bulan*) plantlets derived from tissue culture propagation. Additionally, they successfully propagated 50 pots of the black orchid (*Coelogyne pandurata* Lindl.) using the vegetative splitting method. These outcomes demonstrate that the participants have achieved proficiency in plant propagation and seedling maintenance from diverse sources, encompassing both conventional vegetative propagation and tissue culture. Successful native orchid cultivation is determined by fundamental knowledge of cultivation techniques, which include seedling quality, growth media, environmental conditions, optimal plant nutrient fulfillment, and adequate vitamin supplementation, particularly vitamin B1 or thiamine (Indrawanis & Heriansyah, 2026).

Success in the Integrated Orchid and Stingless Bee System

Native orchids produce flowers that serve as highly potential nectar sources for honey production, while simultaneously requiring insects for pollination to produce viable fruits for replanting. The successful transfer of knowledge regarding this integration was accomplished by combining two-way communication methods with engaging presentation slides, resulting in a 58.61% increase in knowledge. This significant improvement was also driven by hands-on introduction to various local biodiversity potentials recognized by the group members. Stingless bees (*kelulut*) represent effective pollinators with superior honey-producing capabilities compared to other bee species (Seprido & Hadi, 2024).

Adoption of Digital Technology

The capability to promote native orchid products across various digital platforms was achieved by enhancing the digital marketing knowledge of the Muaro Sentajo PKK women's group by 51.6%. This cognitive advancement reflects a positive response from the participants in recognizing how digital ecosystems can broaden marketing horizons. Digital marketing serves as a strategic technological utilization to transcend geographic boundaries, thereby enabling sales to penetrate previously inaccessible regions (Nopriandi et al., 2025).

Economic Impact

This community service initiative generated a substantial impact on driving the local economy, particularly for the members of the Muaro Sentajo PKK group. Each member became capable of producing at least 50 to 100 seedlings per week, which consequently fosters household income growth. Although the initial introduction of products to the digital market involved a rigid adaptation period due to the participants' unfamiliarity with the promotional systems, they eventually managed to execute commercial sales independently and effectively.

Program Sustainability

This community service program is designed to proceed through more advanced subsequent phases. Following the participants' mastery of native orchid cultivation, its integration with stingless bee systems, and digital sales proficiency, the next phase will focus on scaling up the group's business operations. The strategic focus will shift toward regional market segments before progressively expanding to penetrate international markets.



Figure 2. Cultivation Training and Native Orchid Products



4. CONCLUSION

Based on the implementation outcomes of the community service program in Muaro Sentajo Village, the following conclusions can be drawn:

Partner Capacity Enhancement: There was a 46.39% increase in the knowledge and technical skills of the PKK women's group regarding the breeding, maintenance, and quality standardization of market-ready native orchid species.

Digital Independence: The partner group successfully adopted digital technology independently through the creation and management of online storefronts on Shopee and the optimization of Instagram for product branding.

Economic and Social Impacts: The program successfully established a new community-based micro-business unit that contributes directly to increasing household income and strengthening the institutional capacity of the Muaro Sentajo Village PKK.

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